UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,730	08/06/2003	Kirt Debique	221357	8859

22971 7590 08/20/2009

MICROSOFT CORPORATION
ONE MICROSOFT WAY
REDMOND, WA 98052-6399

EXAMINER	
VERDI, KIMBLEANN C	
ART UNIT	PAPER NUMBER
2194	

NOTIFICATION DATE	DELIVERY MODE
08/20/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

roks@microsoft.com
ntovar@microsoft.com

Office Action Summary	Application No.	Applicant(s)	
	10/635,730	DEBIQUE ET AL.	
	Examiner	Art Unit	
	KimbleAnn Verdi	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 May 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-21 are pending in the current application.

Allowable Subject Matter

2. Examiner's suggestion for Allowable Subject Matter:

a. Claim 1 could be allowable if combined with the subject matter of claims 2, 4, 9, 10, and 14.

Claim Objections

3. Claims 16-21 are objected to because of the following informalities: line 1, the recitation of "A computer-readable medium", should be "the computer-readable medium. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. The claim language in the following claims is not clearly understood:

a. **As per Claim 1**:

i. line 1, it is not clearly understood what is meant by providing an interface for communication with a demultiplexer object. (i.e. providing is equivalent to implementing; Examiner suggests amending the claim as follows: implementing an interface for communicating with a demultiplexer object, the interface taking multiplexed data as input and ouputting demultiplexed elementary media streams).

ii. Line 7, it is uncertain if an initialize method configures the demulitplexer object. (i.e. to configure is equivalent to configuring; Examiner suggests amending the claim as follows: an Initialize method configuring the demultiplexer object;).

iii. Lines 8-11, it is unclear if the SetPresentationDescriptor method is dynamically setting an active presentation descriptor of the demultiplexer object? (i.e. to dynamically set is equivalent to dynamically setting an active presentation descriptor; Examiner suggests amending the claim as follows: the SetPresentationDescriptor method dynamically setting an active presentation descriptor of the demultiplexer object to a next pending presentation when an active presentation exists only if all output associated with the active presentation has been serviced).

iv. Lines 17-18, it is not clearly understood what is meant by to provide a new input muxed stream. (i.e. to provide is equivalent to providing; Examiner suggests amending the claim as follows: a ProcessInput method providing a new input muxed stream to the demultiplexer object;).

v. Line 19-20, it is uncertain if a ProcessOutput method retrieves at least one elementary stream. (i.e. to retrieve is equivalent to retrieving; Examiner suggests amending the claim as follows: a ProcessOutput method retrieving at least one elementary stream from an active presentation…).

vi. Line 22, it is unclear if the Flush method flushes currently queued input and output samples? (i.e. to flush is equivalent to flushing currently queued input and output samples; Examiner suggests amending the claim as follows: a Flush method flushing currently queued input and output samples).

b. **Claims 2-21** did not cure the deficiencies of claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-6, 12, 15-16, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun Microsystems, Inc. (hereinafter Sun) ("JAVA™ Media Framework API Guide") in view of Johnson et al. (hereinafter Johnson)

(U.S. Patent 5,455,910), and further in view of Bittinger et al. (hereinafter Bittinger) (U.S. Patent 5,754,774).

8. **As to claim 1**, Sun teaches the invention substantially as claimed including a computer-readable storage medium having computer-executable instructions that when executed on a computing system, perform steps comprising:

providing an interface for communication with a demultiplexer object (section 6, page 1, lines 1-5) which takes multiplexed multimedia data as input and outputs demultiplexed elementary media streams (section 6, page 1, lines 17-23), the interface including:

an Initialize method to configure the demultiplexer object (i.e. Demultiplexer Class Constructor, Appendix C, pages 1-12 and open, Appendix C, page 3, lines 1-8);

a ProcessInput method to provide a new input muxed stream to the demultiplexer object (setSource, section 6, page 2, lines 15-44); and

a ProcessOutput method to retrieve at least one elementary stream from an active presentation (getTracks, section 6, page2, lines 45-50 and page 3, lines 1-33) determined based on the dynamically set active presentation descriptor (i.e. streams, section 6, page 3, line 5.

9. Sun does not explicitly disclose a SetPresentationDescriptor method to dynamically set an active presentation descriptor on the demultiplexer object to a next pending presentation when an active presentation exists only if all output associated

with the active presentation has been serviced, wherein if the SetPresentationDescriptor method is called attempting to set the active presentation descriptor to the next pending presentation when the active presentation exists and not all output associated with the active presentation has been serviced, the SetPresentationDescriptor indicates that the active presentation descriptor cannot be set to the next pending presentation because not all output associated with the active presentation has been serviced; and

a Flush method to flush currently queued input and output samples.

10. However Johnson teaches a SetPresentationDescriptor method (step 105, Figure 10A) to dynamically set an active presentation descriptor on the demultiplexer object to a next pending presentation (step 105, Figure 10A, col. 9, lines 42-49) when an active presentation exists only if all output associated with the active presentation has been serviced (col. 9, lines 45-51), wherein if the SetPresentationDescriptor method is called attempting to set the active presentation descriptor to the next pending presentation when the active presentation exists (step 105, Figure 10A, col. 9, lines 42-49) and not all output associated with the active presentation has been serviced (step 107, Figure 10A, col. 9, lines 49-51), the SetPresentationDescriptor method indicates (i.e. using COMPLETE flag set to FALSE, step 103, Fig. 10A, col. 9, lines 43-44) that the active presentation descriptor cannot be set to the next pending presentation because not all output associated with the active presentation has been serviced (i.e. checking status of COMPLETE flag returns FALSE, step 195, Figure 11, col. 12, lines 46-54).

11. Sun as modified by Johnson does not explicitly disclose a Flush method to flush currently queued input and output samples.

12. However Bittinger teaches a Flush method to flush currently queued input and output samples (col. 23, lines 66-67, col. 24, lines 1-4, and col.26, lines 26-29).

13. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the Demultiplexer of Sun with the teachings of a preprocessing method from Johnson and a multiplex virtual socket from Bittinger because these features would have provided a mechanism which readies Presentation Description Entries for rapid execution whenever the New Presentation is played by parsing through the New Presentation, taking each Presentation Description Entry in turn and processing that entry for placement onto a FIFO Process Queue (col. 8, lines 1-6 of Johnson) and a mechanism for demultiplexing a client/server specific data stream to create a plurality of HTTP data streams (col. 6, lines 16-19 of Bittinger).

14. **As to claim 2**, Sun as modified by Johnson teaches wherein the interface further comprises a GetPresentationDescriptor method to retrieve a clone of the currently active presentation descriptor on the demultiplexer object (col. 9, lines 28-34 and 52-57 of Johnson). The motivation for modifying Sun with the teachings of Johnson is the same as provided in the rejection of claim 1 above.

15. **As to claim 3**, Sun as modified by Johnson teaches wherein the GetPresentationDescriptor method includes a presentation descriptor (i.e. Portion Name, col. 9, lines 28-34 and 52-55 of Johnson). The motivation for modifying Sun with the teachings of Johnson is the same as provided in the rejection of claim 1 above.

16. **As to claim 4**, Sun as modified by Johnson teaches wherein the interface further comprises a GetPendingPresentationDescriptor method to retrieve the next pending presentation (col. 9, lines 59-60 of Johnson). The motivation for modifying Sun with the teachings of Johnson is the same as provided in the rejection of claim 1 above.

17. **As to claim 5**, Sun as modified by Johnson as modified wherein the GetPendingPresentationDescriptor method includes a pending presentation descriptor (i.e. Portion Name, col. 9, lines 28-34 and 52-60 of Johnson). The motivation for modifying Sun with the teachings of Johnson is the same as provided in the rejection of claim 1 above.

18. **As to claim 6**, Sun teaches wherein the Initialize method includes parameters, the parameters comprising:

a muxed stream descriptor (Appendix C, page 1, line 39);

a selected media type for the muxed stream descriptor (Appendix C, page 1, line 38);

an array of major types of elementary streams (Appendix C, page 1, line 22); and

a count of major types in the array of major types (Appendix C, page 1, line 22).

19. **As to claim 12**, Sun teaches wherein the ProcessOutput method further includes an output return value (section 6, page 2, lines 47-48).

20. **As to claim 15,** Sun teaches wherein the multiplexed data has a format comprising at least one of Digital Video, MPEG2, and ASF (section 6, page 1, lines 19-20).

21. **As to claim 16**, this claim is rejected for the same reasons as claim 6 since claim 16 recites the same or equivalent invention, see the rejection to claim 6 above.

22. **As to claim 18**, this claim is rejected for the same reasons as claim 3 since claim 18 recites the same or equivalent invention, see the rejection to claim 3 above. The motivation for modifying Sun with the teachings of Johnson is the same as provided in the rejection of claim 3 above.

23. **As to claim 19**, this claim is rejected for the same reasons as claim 5 since claim 19 recites the same or equivalent invention, see the rejection to claim 5 above. The motivation for modifying Sun with the teachings of Johnson is the same as provided in the rejection of claim 5 above.

24. Claims 7-11,13-14, 17, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun Microsystems, Inc. (hereinafter Sun) ("JAVA™ Media Framework API Guide") in view of Johnson et al. (hereinafter Johnson) (U.S. Patent 5,455,910), and further in view of Bittinger et al. (hereinafter Bittinger) (U.S. Patent 5,754,774), as applied to claim 1 above, and further in view of Morris (2001/0009548 A1).

25. **As to claim 7**, Sun as modified by Johnson and further modified by Bittinger does not explicitly disclose wherein the SetPresentationDescriptor method includes a pointer to a presentation descriptor object.

26. However Morris teaches wherein the SetPresentationDescriptor method includes a pointer to a presentation descriptor object (paragraph [0117]).

27. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have further modified the Demultiplexer of Sun as modified by Johnson and further modified by Bittinger with the teachings of a TS DeMux from Morris because this feature would have further provided a mechanism for converting a data stream received in a specified Transport Stream (TS) format into an output data stream in a specified Program Stream (PS) format (paragraph [0007] of Morris).

28. **As to claim 8**, Sun as modified by Johnson, further modified by Bittinger, and as further modified by Morris teaches wherein the ProcessInput method includes a pointer to a sample object (paragraph [0117] of Morris). The motivation for modifying Sun with the teachings of Johnson, Bittinger, and Morris is the same as provided in the rejection of claim 7 above.

29. **As to claim 9**, Sun as modified by Johnson, further modified by Bittinger, and as further modified by Morris teaches wherein the ProcessInput method further includes a return value having a new presentation flag (paragraph [0049] of Morris). The motivation for modifying Sun with the teachings of Johnson, Bittinger, and Morris is the same as provided in the rejection of claim 7 above.

30. **As to claim 10**, Sun as further modified by Morris teaches computer executable instructions for performing the steps comprising:

if the new presentation flag has a TRUE value (paragraph [0010] of Morris):

calling a GetPendingPresentationDescriptor method to retrieve the next pending presentation (col. 9, lines 59-60 of Johnson);

selecting desired streams (getTracks, section 6, page2, lines 45-50 and page 3, lines 1-33 of Sun); and

calling the SetPresentationDescriptor method to enable processing of samples from the demultiplexer's input queue (step 105, Figure 10A, col. 9, lines 42-49 of

Johnson). The motivation for modifying Sun with the teachings of Johnson, Bittinger, and Morris is the same as provided in the rejection of claim 7 above.

31. **As to claim 11**, Sun as further modified by Morris teaches wherein the ProcessOutput method includes a stream identifier (i.e. Portion Name, col. 9, lines 28-34 and 52-60 of Johnson) and a pointer to a pointer to a sample object (paragraph [0117] of Morris). The motivation for modifying Sun with the teachings of Johnson, Bittinger, and Morris is the same as provided in the rejection of claim 7 above.

32. **As to claim 13**, Sun as further modified by Morris teaches wherein the output return value includes one of an end of stream error code (paragraph [0047] of Morris) and a no more data error code (paragraph [0047] of Morris). The motivation for modifying Sun with the teachings of Johnson, Bittinger, and Morris is the same as provided in the rejection of claim 7 above.

33. **As to claim 14**, Sun as further modified by Morris teaches wherein the interface takes multiplexed data as an in-memory buffer of data (paragraph [0071] of Morris). The motivation for modifying Sun with the teachings of Johnson, Bittinger, and Morris is the same as provided in the rejection of claims 7 above.

34. **As to claim 17**, this claim is rejected for the same reasons as claim 7 since claim 17 recites the same or equivalent invention, see the rejection to claim 7 above. The

motivation for modifying Sun with the teachings of Johnson, Bittinger, and Morris is the same as provided in the rejection of claim 7 above.

35. **As to claim 20**, this claim is rejected for the same reasons as claim 8 since claim 20 recites the same or equivalent invention, see the rejection to claim 8 above. The motivation for modifying Sun with the teachings of Johnson, Bittinger, and Morris is the same as provided in the rejection of claim 8 above.

36. **As to claim 21**, this claim is rejected for the same reasons as claim 11 since claim 21 recites the same or equivalent invention, see the rejection to claim 11 above. The motivation for modifying Sun with the teachings of Johnson, Bittinger, and Morris is the same as provided in the rejection of claim 11 above.

Response to Arguments

37. Applicant's arguments filed on May 26, 2009 have been fully considered but they are not persuasive. In response to the Non-Final Office Action February 23, 2009, applicant argues in regards to claims 1-21:

> (1) **Johnson does not disclose or suggest a SetPresentationDescriptor method to dynamically set an active presentation descriptor of the demultiplexer object to a next pending presentation when an active presentation exists only if all output associated with the active**

presentation has been serviced, wherein if the SetPresentationDescriptor method is called attempting to set the active presentation descriptor to the next pending presentation when the active presentation exists and not all output associated with the active presentation has been serviced, the SetPresentationDescriptor method indicates that the active presentation descriptor cannot be set to the next pending presentation because not all output associated with the active presentation has been serviced.

The Elaborate Process 91 merely processes data as long as there is data to be processed. The Elaborate Process 91 does not provide any indication that an active presentation descriptor cannot be set to a next pending presentation (page 11, lines 7-19).

In response to argument (1), examiner respectfully disagrees and notes that Johnson teaches a SetPresentationDescriptor method (step 105, Figure 10A) to dynamically set an active presentation descriptor on the demultiplexer object to a next pending presentation (step 105, Figure 10A, col. 9, lines 42-49) when an active presentation exists only if all output associated with the active presentation has been serviced (col. 9, lines 45-51), wherein if the SetPresentationDescriptor method is called attempting to set the active presentation descriptor to the next pending presentation when the active presentation exists (step 105, Figure 10A, col. 9, lines 42-49) and not all output associated with the active presentation has been serviced (step 107, Figure 10A, col. 9, lines 49-51), the SetPresentationDescriptor method indicates (i.e. using

COMPLETE flag set to FALSE, step 103, Fig. 10A, col. 9, lines 43-44) that the active presentation descriptor cannot be set to the next pending presentation because not all output associated with the active presentation has been serviced (i.e. checking status of COMPLETE flag returns FALSE, step 195, Figure 11, col. 12, lines 46-54)

In addition, Johnson discloses the Elaborate Process 91 provides an indication that an active presentation descriptor cannot be set to a next pending presentation. Johnson teaches the Elaborate Process 91 sets a flag COMPLETE equal to FALSE step 103 when executing a New Presentation. A COMPLETE flag equal to FALSE can be interpreted as an indication that an active presentation descriptor cannot be set to next pending presentation because in order to determine if the elaborate process has completed processing the presentation a status check of the COMPLETE flag is performed which indicates FALSE is the presentation is still being processed (col. 12, lines 47-54).

Conclusion

38. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,754,242 to Ohkami, U.S. Patent 6,092,107 to Eleftheriadis et al., U.S. Patent 6,418,271 B1 to Cookson et al., U.S. Patent 6,504,944 B2 to Kawamura et al., U.S. Patent 6,535,530 B1 to Matsui, U.S. Patent 6,665,318 B1 to Tomokane et al., U.S. Patent 6,901,078 B21 to Morris, U.S. Publication No. 2001/0031136 A1 to Kawamura et al., U.S. Publication No. 2003/0026276 A1 to Gazit, U.S. Publication No.

2003/0085902 A1 to Vogelaar et al., and WO 98/46006 A2 to Eleftheriadis et al., disclose demultiplexer applications.

39. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

40. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

41. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KimbleAnn Verdi whose telephone number is (571)270-1654. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm EST..

42. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on (571) 272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

43. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hyung S. Sough/
Supervisory Patent Examiner, Art Unit 2194
08/17/09
August 15, 2009
KV